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NOTES ON BIRDS OBSERVED IN TRINIDAD.

BY WILLIAM BREWSTER AND FRANK M. CHAPMAN.

Plate III.

OUR knowledge of tropical birds is so largely derived from the journals of travellers and naturalists, whose arduous explorations in the less accessible parts of the tropics have been attended by hardship and exposure, that most of us are discouraged from even attempting to visit the fascinating regions they describe. The brilliantly colored Trogons, Toucans, Jacamars and Hummingbirds which figure so conspicuously in cases of tropical birds, thus seem to us to be more or less unreal inhabitants of lands forever beyond the bounds of our experience. The truth is, however, that we may be comfortably and safely established in a tropical forest in less time than it frequently takes to reach the nearest European port.

The Island of Trinidad belongs politically to the British West Indies, but faunally it is a small bit of the South American continent which has been detached in recent geological times. Its bird-life therefore is very similar to that of the Venezuelan mainland and is quite unlike the comparatively meagre, insular avifauna of the true West Indian islands to the northward. A visit to Trinidad is thus practically a visit to South America. But it

is not alone the richness of the fauna which leads us to recommend Trinidad as an exceptionally favorable field for the naturalist with limited time at his command. Its additional advantages are : accessibility, a healthy, in fact during the dry season, from December to May, perfect climate ; the safety and material comforts which one is sure of finding in a British colony ; and a Naturalists' Field Club whose members, as we know from pleasant experiences, will cordially receive brother naturalists. It is evident then that a trip to the tropics, far from being an undertaking involving much time and risk of life, may be an excursion from which one may return in two or three months richer both physically and mentally.

From New York to Port-of-Spain, by the direct line of steamers, is a voyage of nine days, or occasionally a steamer of the Windward Island line continues from Barbadoes, the usual terminus, to Trinidad. The latter is by far the more enjoyable sail and, taking only six days longer, gives one an opportunity to land at a dozen or more islands *en route*.

Port-of-Spain possesses fair hotels and stores which will compare favorably with those of our larger cities. Black Vultures swarm in the streets, and many birds, notably the Qu'est-ce-qu'il-dit (*Pitangus sulphuratus*) and Ani (*Crotophaga ani*), are common in the Botanic Gardens and neighboring savannas. Indeed the ornithologist will find much to interest him in the immediate vicinity of the city, but he should lose no time in hastening to the virgin forests, or 'high woods,' as they are locally known, where birds may be studied under absolutely natural conditions. The government rest-house on the Moruga Road, kept by Corporal and Mrs. Stoute, was Mr. Chapman's headquarters during March and April, 1893, and from every point of view leaves nothing to be desired. In fact, we doubt if there exists a place elsewhere in the tropics where for a small compensation a naturalist may find so thoroughly comfortable a home, with the best of food and attention, at the border of a primæval forest.

We, however, were even more fortunate, for in accepting the invitation of Mr. Albert B. Carr to visit him at his cacao estate in the Caparo district we found not only a delightful home in a

region where birds were abundant, but had also the companionship and assistance of Mr. Carr and his brother, both born naturalists and skilled woodsmen, with a thorough knowledge of the country. Every ornithologist knows what this means. Without the guidance of our hosts we should have seen less in three months than we did in three weeks. Through their unceasing efforts every hour of the day, and almost every hour of the night also, brought some interesting incident. The birds and mammals of the region were passed in review for our benefit, and at the conclusion of our stay there were but few species which had not answered to the roll-call of gun, dog, and trap.

Mr. Carr's home is near the point of a narrow wedge of cacao estates which penetrates the forests from Chaguanas on the western side of the island. The limits of the cacao and shading immortal trees, among which his picturesque, thatched house is situated, are sharply defined by the dark walls of the virgin forest, distant only a few hundred yards. In the morning, from its apparently fathomless depths, came the deep-voiced roaring of monkeys (*Myctes*). Toucans, perching on the topmost branches of the higher trees, croaked defiance at some answering rival half a mile away. The united voices of cooing Doves (*Egyptila*) formed a soft monotone to which the ear frequently became insensible. The sweet, weird trilling of Tinamous arose from the bordering undergrowth. In the trees about our house were noisy Qu'est-ce-qu'il-dits; shrike-like Vireos (*Cyclorhis flavipectus*) whistled vigorously; active bands of Tanagers (*Ramphocelus* and *Tanagra*) flitted restlessly about uttering their weak, squeaky notes. Five or six species of Hummingbirds were generally numerous about the blossoming bois immortels, while overhead were flocks containing four species of Swifts (*Chatura*) whose twitterings reminded us of other and very different scenes. In the cool, darkened forest Jacamars were piping, Trogons cooing, Motmots hooted softly, and the mournful whistle of a Pygmy Owl (*Glaucidium*) told of his partially diurnal habits. The species mentioned were all more or less common. Their voices formed an ever present accompaniment for all other bird-music — a background to the picture of bird-life which we do not intend to attempt describing.

Our stay at Caparo was crowded with events, but the time was too short for us to make many observations sufficiently novel to warrant publication in the pages of a scientific journal, and in this connection we propose to speak of but three species, to the published accounts of whose life-histories, thanks to Mr. Carr's assistance, we think we can make some additions. They are the Bell-bird or Campaño (*Chasmorhynchus variegatus*), a Humming-bird locally called 'Brin-blanc' (*Phaëthornis guyi*), and a large Goatsucker (*Nyctibius jamaicensis*).

To what extent the other three species of the genus deserve the reputation sometimes given them we cannot say, but the voice of *Chasmorhynchus variegatus* would undoubtedly prove a disappointment to those who expect a Bell-bird to be a Bell-bird in more than name. But while its notes bear no resemblance to the "deep tolling of a bell" they proved none the less singular, and we class them among the most remarkable we have ever heard.

To hear a Campaño is one thing, to see it quite another. The birds haunt the tree-tops in the virgin forest, where, concealed by the canopy of foliage and intervening parasitic plants and creepers, they can be found even by practiced hunters only under favorable conditions. Mr. Carr had prepared us for the failure which attended our first Campaño hunt. Nevertheless, we actually heard a Bell-bird calling,—sufficient encouragement, if we had needed any, to continue the search. Our persistency, however, was not tested. The following day Mr. Brewster and Mr. Carr discovered a Campaño within a mile of the house and had an exceptional opportunity to study it. After following the sound of the bird's voice for a quarter of a mile, they finally saw it perched on a bare twig at the top of a tree about seventy-five feet from the ground. After watching it there for about fifteen minutes, during which time it uttered its several calls, it was disturbed by two Toucans alighting near it and sought a perch in a strong, clear light about twenty feet from the ground and not over twenty yards from the observers. This, according to Mr. Carr, was an unusual proceeding. It remained in this position for about fifteen minutes, repeating all its notes. The following day we all visited the place and the Bell-bird kept the tryst, appearing on the high perch it had occupied the preceding day.

The records of these two occasions were read aloud and endorsed by each member of the party. From them we present the following description of the Campanero's calls. The bird has three distinct notes, the first *bok*, the second *tui*, the third *tang*. The *bok* is by far the loudest and for this reason is the one most frequently heard, and is doubtless the call alluded to by previous writers.¹ It can be heard in the flat forest at a distance of about 600 yards. Waterton, it may be remembered, says the "toll" of *Chasmorhynchus niveus* may be heard at a "distance of three miles." The *bok* is sometimes uttered with much regularity about every ten seconds; at other times longer or shorter intervals may elapse. At a distance of four or five hundred yards it resembles the stroke of an axe on hard, resonant wood. One would now imagine that the bird was within seventy-five yards, so deceptive is the nature of this note. As one approaches, the call does not seem to increase in volume and one is apt to imagine that the bird is retreating slowly from tree to tree. This impression, however, is dispelled when one comes within one hundred yards of the bird, for the sound then becomes much louder until, as one gets directly beneath the caller, its volume is simply tremendous. It now has a slightly rolling quality — *br-r-r-ock* — and is so abrupt and explosive in character that it is nearly as startling as the unexpected report of a gun. At each utterance of this note the bird opens his bill to its widest extent and throws his head forward and downward with a violent, convulsive jerk as if he were in a passion and striking viciously at some rival. This motion is so violent that the bird evidently has some difficulty in maintaining his footing during its delivery as well as in recovering his balance afterward.

The second note, *tui*, is much softer and is delivered from six to eleven times in such rapid succession that the notes form an unbroken series. Despite this, each *tui* is closely followed by a metallic *ting* which sounds exactly like an echo and appears to be of about the same duration and nearly as loud as the note it supplements. The *tui* notes are given so quickly that at first it did not seem possible for the bird to produce another note between

¹ Cf. Taylor, *Ibis*, 1864, p. 88.

them, and it was only after repeated observations we became convinced that the *ting* was an integral part of the *tui* call. While uttering these notes the bird sits rather erect and perfectly motionless save for a slight tremulous movement of the throat and tail which accompanies the delivery of each *tui*.

The third note, *tang*, is also repeated a number of times—eighteen to thirty-three—in quick succession. It sounds much louder than the *tui* and the intervals between the notes, though short, are well marked. Sometimes the bird began slowly and gradually increased the rapidity of its utterance, at others there were regular intervals between the notes. The *tang* may be likened to the sound produced by striking a piece of bar iron a sharp blow with a hammer. It is accompanied or followed by a distinctly metallic but not clear, ringing vibration. At a distance of one hundred yards the *tang* sounds like a slow strumming on the C natural string of a banjo, as Mr. Carr actually demonstrated. It can be heard at a greater distance than the *tui* but not so far as the *bok* and at two hundred yards would attract the attention of only a practiced ear.

While ‘tangling’ the bird sits rather erect, the head well up, the wings drooping beneath the closed tail. At each utterance the tail vibrates slightly, there is a marked swelling of the black throat, and the mouth is opened to its widest extent, the lower mandible being worked with some apparent effort while the upper mandible and rest of the head are held perfectly motionless.

Although probably an extremely local and not very active species the bird was alert and watchful. Its movements were quick, the head being often turned from side to side, or the wings were twitched nervously, and at more or less regular intervals it would turn squarely on its perch and face in the opposite direction. The fleshy appendages on the Bell-bird’s throat resemble bits of leather shoe-string. They hang loosely in the freshly killed specimen and are then so conspicuous that we were surprised to find they could not at any time be distinguished on the living birds.

The greenish plumage of the female Bell-bird renders it so difficult of observation that even Mr. Carr was not familiar with it. It was therefore a rare bit of good fortune for us that a

female of this forest-living species so far departed from its normal habit as to leave the woods and perch on the topmost branch of a bois immortel which shaded the palm-thatch beneath which we prepared specimens — an offered sacrifice we were not slow to accept.

The observations¹ of Mr. Chapman on the song-habit of the 'Rachette' Hummingbird (*Pygmornis longuemareus*) were confirmed by our discovery of a locality to which the birds evidently came to sing, and Mr. Carr directed us to two resorts regularly frequented by *Phaëthornis guyi* for the same purpose. Both were in the forest where the trees were rather small and slender and plentifully undergrown with roseau palms. One locality was not far from the house. We visited or passed it many times always hearing from one to six birds singing within an area one hundred feet square. Each bird seemed to have its own particular perch which we would find occupied day after day. The song of this species is louder and has more character than that of *Pygmornis*. It is an unmusical *yep-yep-yep* uttered very rapidly, and, when the bird is undisturbed, continued for several minutes without break or pause. They sit erect but in an easy attitude with the points of the wings drooping below the tail. With every *yep* the long bill is thrown nearly straight up and the mouth slightly opened while the red lower mandible shows conspicuously and the body is twitched convulsively. Each note is accompanied by one or two vertical vibrations of the tail. Rarely, and apparently when under the influence of some excitement, the vibrations are increased in length, force and rapidity until a maximum of motion is attained. Then there is a second's pause, the tail-feathers are spread to the fullest extent and pointed forward over the back until the tips of the long central feathers nearly touch the back of the head. The effect, as may be imagined, is most striking, the birds suggesting diminutive Turkey-cocks.

More or less frequently a rival would approach, buzzing loudly, when the calling bird darted recklessly at the trespasser, and the two birds dashed wildly through the forest, one apparently in

¹ Bull. Am. Mus. Nat. Hist., VI, 1894, p. 55.

pursuit of the other, squeaking loudly and uttering an explosive *tock, tock*. This sound can be closely imitated by pressing the tongue against the roof of the mouth and withdrawing it forcibly. Generally the perching bird returned within a minute and resumed its interrupted song.

It therefore appears that *Pygmornis longuemareus* and *Phaëthornis guyi* — and probably also other species of these genera — have regular resorts which they visit for the purpose of singing and that they evidently sing at no other time. The significance of this habit — unique so far as we know — we cannot satisfactorily explain. All the specimens killed at these singing haunts were males. Whether the females are present we cannot say.

There are few natives of Trinidad who do not know, by name at least, the animal locally termed 'Poor-me-one.' This name is given to a small Ant-eater (*Cyclothurus didactylus*) which is popularly supposed to utter the notes serving as the origin of the words. Mr. Carr, however, as quoted by Mr. Chapman¹, definitely proved that Poor-me-one was a species of Goatsucker by shooting the bird in the act of calling, but failing to preserve the specimen, its specific identity could not be determined.

Only a person who has heard Poor-me-one calling from the moonlit forest can understand how ardently one longs to identify the caller. Our curiosity was frequently aroused by the hooting of some to us unknown species of Owl, or even the cry of some night-bird whose identity was an entire mystery, but the cry of Poor-me-one is possessed of a human quality which appeals to one as strongly as the voice of a fellow-being. Its tone is so sweet and tender, so expressive of hopeless sorrow, that even the negroes are impressed by it, as its native name, Poor-me-one, meaning "Poor me all alone," clearly shows. To identify Poor-me-one, therefore, became one of our chief objects.

This strange bird calls only on moonlit nights from February to June. The calendar told us the moon would be full March 20, and as the slender crescent grew larger we listened anxiously for the notes of *Nyctibius*. But we neither saw nor heard sign of it until the evening of the 16th when, as we were strolling home-

¹ Bull. Am. Mus. Nat. Hist., VI, 1894, p. 59.

ward from the forest, we saw a large bird, which we at first supposed was an Owl, sitting on the top of a stub about thirty feet in height. We had no difficulty in identifying this bird as a *Nyctibius* and congratulated ourselves on the knowledge that it was probably resident so near our house. For the four succeeding evenings doubtless the same bird appeared about half an hour after sunset and on set wings sailed slowly and majestically from a point of the forest distant some two hundred yards, until directly above the stub upon which we had first seen him. After descending in a broad spiral, which ended a few feet below his perch, he pitched sharply upward, closing his wings as he secured a footing. His position was upright and he seemed a continuation of the stub, against which his tail was pressed. He invariably faced the west but kept his head turning from side to side after the manner of Flycatchers. At short, irregular intervals — usually two or three times a minute — he launched out after insects, flying in a perfectly straight, slightly ascending line with firm and vigorous, yet easy wing-beats, his tail wide-spread. At the moment he reached his prey he often turned abruptly to secure it, then wheeled suddenly, and returned to the stub by a long, slow, graceful glide and lit as before described. With few exceptions his sallies were made toward the west, evidently because of the background afforded by the after glow, and he often flew thirty or forty yards before reaching his object.

Interesting as it was to observe a Goatsucker in the rôle of a hawk-like Flycatcher, the certainty of our identification made us earnestly wish to hear the bird call, when the identity of Poor-me-one and *Nyctibius* could be instantly settled. But each night the bird returned to the forest in silence.

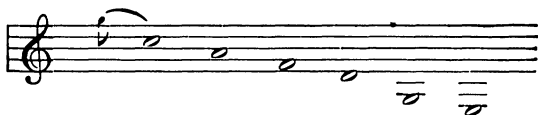
March 20 the moon was full and shortly after eight o'clock, to our great delight, we heard Poor-me-one calling from the forest. We at once started in the direction of the sound. Crossing a belt of cacao, leaping some of the drains, stumbling into others, wading knee-deep through the dew-drenched grass, breathless and perspiring, we came at length to the edge of a low, swampy woods whence issued the strange cry. The bird now became silent. We listened anxiously for several minutes and were greeted only by the *cook-er-ree-coo* and startling scream of an Owl (*Megascops brasi-*

liensis). Finally, after consultation, Mr. Carr whistled an imitation of the cry of Poor-me-one. Almost instantly an answer came from the woods and soon a large Goatsucker, which we at once recognized as the species we had seen on the stub, came sailing directly over us. He circled twice, uttered a low call, and alighted on the topmost twig of a bois immortel distant twenty yards. A moment later, puffing out his throat, he uttered the Poor-me-one call. We suppressed our exultation with difficulty.

After calling a dozen or more times the bird returned to the woods, but several times returned in response to our imitation of its notes. Usually he perched on the topmost, slender twigs of a bois immortel, the last situation one would expect a Goatsucker to select.

The locality was not far from the stub upon which we had originally discovered *Nyctibius*, and we had little doubt that the individual seen there was the one we had heard calling. Indeed, one hour later this bird, which we easily recognized by a peculiarity in its call, came to the vicinity of the stub in response to Mr. Carr's whistle. Here he was joined by his mate, both birds perching in the topmost branches of the forest trees.

The song of Poor-me-one consists of eight notes, which Mr. Carr, in an article¹ on this species, writes:—



At a distance of half a mile only three of these may be heard, and all are not audible until one is quite near the singer. The inexpressibly sad, human quality of Poor-me-one's call affects every one who hears it. Waterton, we have no doubt, refers to this bird when he compares the voice of "the largest Goatsucker in Demarara" to "the last wailing of Niobe for her poor children, before she was turned into stone," and, in describing the call, writes: "Suppose yourself in hopeless sorrow, begin with a high, loud note, and pronounce 'ha, ha, ha, ha, ha, ha, ha,' each note lower and lower, till the last is scarcely heard, pausing a moment or two twixt every note. . . ."

¹ Journal Trinidad Field Naturalists' Club, II, Dec. 1894, p. 137.

Goss,¹ on the contrary, in his excellent account of the habits of this species, describes its call as a "loud and hoarse *ho-hoo*," and adds: "Sometimes the same syllables are heard, in a much lower tone, as if proceeding from the depth of the throat." The account of so careful an observer is not to be questioned, and it is quite probable that the notes of the Jamaican bird differ markedly from those of the birds which inhabit Trinidad.

It seems little short of murder to kill one of these birds. Certainly to shoot a calling bird was out of the question. Our single specimen was shot as he sailed by one evening near the stub where our first observations were made. He was wing-tipped and before sacrificing him to the cause of science we secured the photograph from which the illustration (Pl. III) accompanying this article was drawn.



LIST OF BIRDS OBSERVED IN THE VICINITY OF
FORT KEOGH, MONTANA, FROM JULY, 1888,
TO SEPTEMBER, 1892.

BY CAPT. PLATTE M. THORNE, U. S. A.

FORT KEOGH, on the right bank of the Yellowstone, has an altitude of 2365 feet. The river bottom has an average width of two miles, and has in parts a small and obscurely defined second bench. River sand is reached at an average depth of six feet in the higher parts. Tongue River empties into the Yellowstone two miles to the north. Both rivers are rapid, and the only still water is an irregular, reedy pond fed by springs and about three-fourths of a mile long. This pond goes dry in summer some years and remains so during the winter. The growth of cottonwood along both rivers is in places heavy, some trees showing great age. Wild rose bushes grow luxuriantly on the moister

¹ Birds of Jamaica, p. 42.